ZZW AF 2665

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Shane M. Rogers et al.	§	Group Art Unit:	2665
		§		
Serial No.:	09/517,903	§		
		§	Examiner:	Steven Nguyen
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For:	Transporting Telephony	§	Atty. Dkt. No.:	NRC.0002US
	Signaling Over a Data Network	§		(11869SCUS01U)

Mail Stop **Appeal Brief-Patents**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37

Sir:

The final rejection of claims 1-18, 20-31, and 34-55 are hereby appealed.

I. REAL PARTY IN INTEREST

The real party in interest is the Nortel Networks Limited, by virtue of the assignment

recorded at reel/frame 011195/0706.

II. RELATED APPEALS AND INTERFERENCES

None.

Date of Deposit: _February 25, 2005_

I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as **first class mail** with sufficient postage on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

Ginger Yount

III. STATUS OF THE CLAIMS

Claims 1-18, 20-31, and 34-55 have been finally rejected and are the subject of this appeal. Claims 19, 32, and 33 have been cancelled.

IV. STATUS OF AMENDMENTS

No amendment has been submitted after final rejection.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v).

Claim 1 recites an apparatus (*e.g.*, Figs. 1A, 1B, 2, interface device 16 or 30; 5:1-6) for use in a telephony system that comprises:

- a digital interface (*e.g.*, Fig. 5: line interface 302; 9:27-10:4) for connection with a stimulus telephone (*e.g.*, Figs. 1A, 1B, 2: stimulus telephone 18);

- a packet interface (*e.g.*, Fig. 5: network interface 316 and/or UDP/IP stack 320; 10:7-18) for communicating with a packet-based network (*e.g.*, Figs. 1A, 1B: data network 12); and

- a controller (*e.g.*, Fig. 5: control task(s) 308 and/or control unit 310) to receive stimulus control information (*e.g.*, 8:19-28) from the digital interface and to encapsulate the stimulus control information into one or more packets for transmission over the packet-based network through the packet interface (*e.g.*, 10:19-11:23).

Claim 20 recites a method for use in a telephony system, where the method comprises:

- communicating stimulus control information (*e.g.*, 8:19-28) with a stimulus telephone through a first interface (*e.g.*, Fig. 5: line interface 302; 9:27-10:4) connected to the stimulus telephone, and packet information with a packet-based network through a packet interface (*e.g.*, Fig. 5: network interface 316 and/or UDP/IP stack 320; 10:7-18);

- encapsulating stimulus control information received from the first interface (*e.g.*, 10:19-11:20); and

- transmitting the encapsulated stimulus control information (*e.g.*, 8:19-28) as at least one packet to the packet interface (*e.g.*, 11:21-23).

Claim 28 recites an article including one or more machine-readable storage media containing instructions for call control in a telephony system, the instructions when executed causing a device (*e.g.*, Figs. 1A, 1B, 2: interface device 16 or 30; 5:1-6) to:

- receive data according to a stimulus protocol (*e.g.*, 8:19-28) from a first interface (*e.g.*, Fig. 5, line interface 302; 9:27-10:4) connected to a stimulus telephone (*e.g.*, Figs. 1A, 1B, 2: stimulus telephone 18);

- encapsulate the data into one or more packets (*e.g.*, 10:19-11:20); and

- communicate the one or more packets to a packet-based data network (*e.g.*, 11:21-23).

Claim 30 recites a data signal embodied in a carrier wave and containing instructions for call control in a telephony system, the instructions when executed causing a device to:

- receive at least one packet containing a stimulus message (*e.g.,* 8:19-28) according to a first language;

- decapsulate the at least one packet to extract the stimulus message according to the first language (*e.g.,* 11:24-32); and

- send the stimulus message according to the first language to a first interface (*e.g.,* Fig. 5, line interface 302; 9:27-10:4) connected to a stimulus telephone (*e.g.,* Figs. 1A, 1B, 2: stimulus telephone 18; 12:1-5).

Claim 34 recites an apparatus for use in a telephony system. Claim 34 recites the following means-plus-function elements pursuant to 35 U.S.C. § 112, ¶ 6 (structures corresponding to each means-plus-function element are identified below by referencing the specification and drawings, as required by 37 C.F.R. § 41.37(c)(1)(v)):

- means for receiving (Fig. 5, control task(s) 308 and/or device driver 306; 10:32-34) a stimulus message (*e.g.,* 8:19-28) through a first interface (*e.g.,* Fig. 5: line interface 302; 9:27-10:4) connected to a stimulus telephone (*e.g.,* Figs. 1A, 1B, 2: stimulus telephone 18);

- means for encapsulating (Fig. 5, control task(s) 308 and/or UDP/IP stack 320; 7:18-32; 11:1-20) the stimulus message into at least one packet; and

- means for transmitting (Fig. 5: UDP/IP stack 320 and/or network device driver 318 and/or network interface 316; 11:21-23) the at least one packet to a packet-based network.

Dependent claim 45, which depends from claim 34, was argued separately from claim 34 pursuant to 37 C.F.R. § 41.37(c)(1)(vii). However, claim 45 does not recite a further means-plus-function element.

Dependent claims 47 and 48, both depending from claim 34, were also argued separately. Each of claims 47 and 48 includes an additional means-plus-function element. Claim 47 further recites a means for encrypting the at least one packet, which corresponds to the following structures in the specification: Fig. 5: control task(s) 308 and/or UDP/IP stack 320 and/or network device driver 318; 7:26-8:8. Claim 48 further recites a means for scrambling the stimulus message before encapsulating, which corresponds to the following structures in the specification: Fig. 5: control task(s) 308 and/or UDP/IP stack 320 and/or network device driver 318; 7:26-8:8.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1, 2, 5-11, 15-18, 20-24, 26-31, 34, 36-38, 41, 43-46, And 51-55 Were Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 6,078,582 (Curry) In View Of U.S. Patent No. 6,711, 166 (Amir).

B. Claim 3 Was Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,118,864 (Chang).

C. Claim 4 Was Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 5,136,585 (Nizamuddin).

D. Claims 12, 25, 39, And 42 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,487,186 (Verthein).

E. Claims 13, 26, And 48 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,275,573 (Naor).

F. Claims 13, 14, 26, 27, 47, And 48 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,438,124 (Wilkes).

G.   Claims 35, 40, 49, And 50 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,389,010 (Kubler).

VII.   ARGUMENTS

A.   Claims 1, 2, 5-11, 15-18, 20-24, 26-31, 34, 36-38, 41, 43-46, And 51-55 Were Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 6,078,582 (Curry) In View Of U.S. Patent No. 6,711, 166 (Amir).

1.   Claims 1, 2, 6, 16, 20, 21 ,28, 29, 34, 36, 38, 46, 51-53, and 55.

Each of independent claims 1, 20, 28, 30, and 34 were rejected as being obvious over the asserted combination of Curry and Amir.

It is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness against the claims for at least the following reasons: (1) there existed no motivation or suggestion to combine the teachings of Curry and Amir; and (2) even if they can be properly combined, the hypothetical combination of Curry and Amir does not teach or suggest *all* elements of the claimed invention. *See* MPEP § 2143 (8th ed., Rev. 2), at 2100-129.

The Examiner identified element 72A (the Internet telephony server) of Curry as containing the digital interface, packet interface, and controller recited in claim 1. As shown in Figure 6 of Curry, each ITS (72A, 72B, and 72C) is connected to a corresponding central office (CO). The central office of Curry does *not* communicate stimulus control information to the ITS. Therefore, the ITS 72 of Curry cannot possibly include a digital interface to communicate with a stimulus device, nor is it possible for the ITS of Curry to include a controller that receives stimulus control information from the digital interface and encapsulates the stimulus control information into one or more packets for transmission over a packet-based network.

The communication link between the central office 41 and the ITS 72 includes a trunk line 68 and signaling line 70 to support interoffice signaling. Curry, 11:62-64. The interoffice

signaling between the central office 41 and the ITS 72 cannot be considered stimulus control information from a stimulus device. Persons of ordinary skill in the art at the time of the present invention recognized the distinction between stimulus messaging and other forms of messaging. *See, e.g.,* U.S. Patent No. 6,549,621 (cited in Information Disclosure Statement of May 13, 2004), 3:40-43 ("Generally, there are two types of call control messaging, which will be referred to as stimulus messaging and functional messaging, respectively."); U.S. Patent No. 6,470,020 (cited in Information Disclosure Statement of May 13, 2004), 1:13-65 (describing the differences between a stimulus signaling protocol and a message protocol). In fact, as recognized by the '621 patent, a *translator* (element 23 in Figure 2 of the '621 patent) is needed to translate between stimulus messaging and functional messaging such as ISDN messaging. '621 patent, 4:51-58. The messaging between the central office and the ITS as performed in Curry constitutes functional messaging (SS7 messaging in Curry), which is *not* the same as stimulus control information as recited in claim 1.

Recognizing that Curry fails to disclose the subject matter of the claims, the Examiner cited a second reference, Amir, as teaching claim elements missing from Curry. However, in the rejection, the Examiner stated that Curry "does not disclose a stimulus telephone for coupling to a PBX." 7/13/2004 Office Action at 2. It is unclear what relevance this statement has with respect to claim 1. No PBX is recited in claim 1. However, the next sentence of the Office Action appears to explain what the Examiner intended—Amir was cited as disclosing "encapsulating the signaling information from the stimulus telephones for transmitting via Internet . . . ." *Id.* The implication made by the Examiner with this statement is that Curry does not teach the controller of claim 1, which controller receives stimulus control information from

the digital interface and encapsulates the stimulus control information into one or more packets

for transmission over the packet-based network through the packet interface.

Contrary to the assertion made by the Examiner, it is respectfully submitted that Amir

fails to teach the element missing from Curry. As depicted in Fig. 2A of Amir, the terminals that

can be connected to a switch include ISDN terminals, analog telephones, CORPNET telephones,

or protocol-based terminals such as H.323, H.324, and H.320 terminals. As taught by the '621

patent, H.323 and ISDN are examples of functional messaging, as contrasted with stimulus

messaging. U.S. Patent No. 6,549,621, 3:40-52. Similarly, the protocol-based messages

provided by H.324 and H.320 terminals are also examples of functional messages that are not

stimulus messages. In other words, encapsulating a H.323, H.320, or H.324 message for

transmission over a packet-based network would not constitute encapsulating a stimulus

message.

The Examiner cited to element 94 of Amir as teaching the encapsulating of stimulus

messaging from a stimulus telephone. Element 94 depicted in Fig. 2A of Amir is a "protocol

converter" for converting non-H.323 signaling, such as ISDN, to H.323 signaling. *See* Amir,

9:48-53. In other words, any non-H.323 signaling received from a terminal by the switch has to

be first *converted* by the protocol converter 94 to H.323 signaling for transmission over the

packet-based network to the other switch. Thus, the only control information that is

encapsulated by the switch of Amir is functional messaging (such as H.323 messaging) for

transmission over the packet-based network. Amir clearly does not teach *encapsulating stimulus*

control information into packets for transmission over a packet-based network—Amir teaches

the encapsulating of functional messaging such as H.323 messaging for transmission over a

packet-based network.

Therefore, in view of the erroneous statement made by the Examiner that Amir teaches an element of claim 1 that in fact is not disclosed or suggested by Amir, it is respectfully submitted that the hypothetical combination of Curry and Amir does not teach or suggest *all* elements of claim 1. The *prima facie* case of obviousness is defective for at least this reason.

Moreover, there was no motivation or suggestion to combine the teachings of Curry and Amir in the manner proposed by the Examiner. Amir in fact would have led a person of ordinary skill in the art away from the invention. What Amir would have suggested to such a person of ordinary skill is that any non-functional messaging from a terminal would first have to be converted to functional messaging, such as H.323, before transmission over a packet-based network. Such a teaching clearly contradicts the subject matter of claim 1 relating to encapsulating of stimulus control information into one or more packets for transmission over the packet-based network. Therefore, in view of the fact that Amir would have suggested a completely different solution than the subject matter of claim 1, there did not exist any motivation or suggestion to combine Curry with Amir.

Thus, a person of ordinary skill in the art would not have been motivated, based on the teachings of Curry and Amir, to combine Curry and Amir to achieve the claimed subject matter. The *prima facie* case of obviousness is defective on this further ground.

With respect to independent claim 20, the asserted combination of Curry and Amir does not disclose or suggest encapsulating *stimulus control information* received from a first interface connected to a stimulus telephone, for reasons similar to those of claim 1. A *prima facie* case of obviousness has thus not been established with respect to claim 20.

With respect to independent claim 28, the asserted combination of Curry and Amir does not disclose or suggest encapsulating data according to a *stimulus protocol* into one or more

packets for communication to a packet-based network, where the data according to the stimulus

protocol is received from a first interface connected to a stimulus telephone. A *prima facie* case

of obviousness has thus not been established with respect to claim 28.

With respect to independent claim 34, the asserted combination of Curry and Amir does

not disclose or suggest a means for encapsulating a *stimulus message* received through an

interface *connected* to a stimulus telephone. A *prima facie* case of obviousness has thus not been

established with respect to claim 34.

For the foregoing reasons, it is respectfully requested that the final rejection of the above

claims be reversed.

2.   Claims 30, 31, and 54.

Claim 30 was also rejected as being obvious over Curry and Amir. It is respectfully

submitted that the asserted combination of Curry and Amir does not render obvious the

following combination of elements: receiving at least one packet containing a *stimulus message*

according to a first language, decapsulating the at least one packet to extract the *stimulus*

message according to the first language, and sending the *stimulus message* to an interface

connected to a stimulus telephone. Even if Curry and Amir can be properly combined, the

hypothetical combination of Curry and Amir fails to disclose or suggest *all* elements of claim 30.

Moreover, there existed no motivation or suggestion to combine the teachings of Curry and

Amir, for the reasons stated above with respect to claim 1. Therefore, a *prima facie* case of

obviousness has not been established with respect to claim 30.

For the foregoing reasons, it is respectfully requested that the final rejection of the above

claims be reversed.

3. Claims 7 and 22-24.

Claim 7, which depends from claim 1, was also rejected as being obvious over Curry and Amir. Claim 7 is allowable for at least the same reasons as for claim 1. Moreover, claim 7 recites that the stimulus control information (that is encapsulated into one or more packets for transmission over a packet-based network through a packet interface) is according to a first stimulus language, where the stimulus control information *remains in the first stimulus language after encapsulation.*

As discussed above, the ITS of Curry is incapable of receiving stimulus control information, since the ITS is connected to a central office (CO). Therefore, the information received by the ITS from the CO includes functional messaging, not stimulus control information.

The other reference cited by the Examiner, Amir, actually teaches away from the invention of claim 7. Amir teaches a protocol converter 94 (*see* Fig. 2A of Amir) that converts non-H.323 signaling, such as ISDN or signaling from the analog telephone 44A, into H.323 signaling. *See* Amir, 9:48-53. Because conversion is performed on any non-H.323 signaling received from a terminal by the protocol converter 94 in the switch of Fig. 2A in Amir, it is impossible for Amir to encapsulate any stimulus control information that is according to a first stimulus language, where the stimulus control information *remains in the first stimulus language after encapsulation.*

Because Amir teaches away from encapsulating stimulus control information where the stimulus control information remains in the stimulus language after encapsulation, a person of ordinary skill in the art would not have been motivated to combine the teachings of Curry and Amir to achieve the invention of claim 7.

Claim 22, which depends from independent claim 20, is similarly allowable over the asserted combination of Curry and Amir, since claim 22 recites inserting stimulus control information in its native stimulus language into a payload of the at least one packet. In contrast, Amir teaches away from the invention, as Amir teaches the use of a protocol converter 94 to convert non-H.323 signaling to H.323 signaling.

For the foregoing reasons, it is respectfully requested that the final rejection of the above claims be reversed.

4. Claims 8-11.

Claim 8, which depends from claim 1, was also rejected as being obvious over Curry and Amir. Claim 8 is allowable for at least the same reasons as for claim 1. Moreover, claim 8 recites that the controller encapsulates stimulus control information without translating the stimulus control information into a different form.

A person of ordinary skill in the art would not have been motivated to combine the teachings of Curry and Amir to achieve the invention of claim 8, since Amir teaches away from the "without translating" aspect of the subject matter of claim 8. As discussed above, Amir teaches the use of a protocol converter to convert non-H.323 signaling to H.323 signaling – therefore, Amir actually teaches away from the subject of claim 8, in which stimulus control information is encapsulated *without translating* the stimulus control information into a different form.

This is a further reason that no motivation or suggestion existed to combine the teachings of Curry and Amir to achieve the claimed invention.

For the foregoing reasons, it is respectfully requested that the final rejection of above claims be reversed.

5. Claims 17, 37, 41, and 43-45.

Claim 17, which depends from claim 1, was also rejected as being obvious over Curry and Amir. Claim 17 is allowable for at least the same reasons as for claim 1. Moreover, claim 17 recites that the stimulus control information (which is encapsulated into one or more packets for transmission over a packet-based network) includes at least one of hook state information and key press event information, where the controller encapsulates the at least one of the hook state information and key press event information into the one or more packets.

Neither Curry nor Amir teaches or suggests a controller to encapsulate at least one of the hook state information and key press event information into one or more packets. The Examiner pointed to the passage as column 14, lines 9-17, and elements 136 and 146 of Fig. 9 of Curry as disclosing such a feature. 7/13/2004 Office Action at 4. Appellant respectfully disagrees that this passage of Curry teaches the feature of claim 17. The cited column 14 passage of Curry describes a telephony platform 100 in the ITS 72 that performs basic telephony functions, including incoming call detection (ringing, trunk seizures, etc.), call supervision/progress detection (busy tone, disconnect, connect, recorded announcement, dial tone, speech, etc.), call origination, DTMF, call termination, call disconnect, switch hook flash, and so forth. However, there is no indication or suggestion anywhere in Curry that such information is encapsulated into one or more packets by the ITS 72 disclosed in Curry. In fact, what is packetized by the ITS of Curry is a signaling message in the form of a query message. Curry, 15:33-36. This signaling message in the form of a query message does *not* contain a hook state information or a key press event information.

Amir similarly provides no teaching that would have suggested a modification of Curry to achieve the additional subject of claim 17. The signaling packetized by Amir is H.323 signaling, which does not include hook state information or a key press event information.

The foregoing is a further basis that a *prima facie* case of obviousness has not been established with respect to claim 17.

Claim 37, which depends from claim 1, recites that the stimulus control information (encapsulated into one or more packets) contains a command according to a stimulus protocol selected from the group consisting of off-hook, on-hook, and handset volume control, handset connect, and handset disconnect. There is no teaching or suggestion by either Curry or Amir of encapsulating such stimulus control information into one or more packets.

Claims 41, 43, 44, and 45, which depend from independent claims 20, 28, 30, and 34, respectively, are also allowable for reasons similar to those of claims 17 or 37.

For the foregoing reasons, it is respectfully requested that the final rejection of the above claims be reversed.

B.   Claim 3 Was Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,118,864 (Chang).

Claim 3, which depends from claim 1, was rejected as being obvious over Curry, Amir, and Chang. In view of the defective rejection of base claim 1 over Curry and Amir, it is respectfully submitted that the obviousness rejection of dependent claim 3 over Curry, Amir, and Chang is also defective.

Additionally, the Examiner conceded that Curry and Amir fail to disclose the digital interface is a UART interface. 7/13/2004 Office Action at 5. Chang was cited as disclosing that

"an interface for SMDI is UART (Fig 1D wherein the central office or PBX is link [sic] with the gateway by UART interface 56 for transmitting the telephone number between them)." *Id.*

Moreover, it is noted that the RS-232 serial interface 56 in Fig. 1D of Chang, cited by the Examiner, receives control signals from PBX equipment or a central office switch over a line 54. Thus, what is received by the serial interface 54 of Chang is *functional messaging*, not stimulus control information. Therefore, no motivation or suggestion existed to combine the teachings of Curry, Amir, and Chang, to provide a UART interface through which stimulus control information is received for encapsulation into one or more packets.

Therefore, a *prima facie* case of obviousness has not been established with respect to claim 3. Reversal of the final rejection of the above claim is respectfully requested.

C.   Claim 4 Was Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 5,136,585 (Nizamuddin).

Claim 4, which depends from claim 1, was rejected as being obvious over Curry, Amir, and Nizamuddin. In view of the fact that the rejection of base claim 1 over Curry and Amir is defective, it is respectfully submitted that the obviousness rejection of claim 4 over Curry, Amir, and Nizamuddin is also defective.

In addition, with respect to claim 4, the Examiner conceded that Curry and Amir fail to disclose that the digital interface includes a time compression multiplex interface. 7/13/2004 Office Action at 5. The Examiner cited Nizamuddin as teaching that the digital interface includes a time compression multiplex interface. Specifically, the Examiner identified element 12 (TDM TCM interface) in Fig. 1 of Nizamuddin as teaching the time compression multiplex interface of claim 4. Fig. 1 of Nizamuddin depicts a digital key telephone system that connects various digital telephone instruments (13, 14) and personal computers (15, 17) to other devices

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via line or trunk circuits 23. Nizamuddin, 11:61-67. There is absolutely no teaching whatsoever that the data received by the TCM interface 12 in Fig. 1 of Nizamuddin is encapsulated into one or more packets. Therefore, Nizamuddin would not have provided the requisite suggestion or motivation to combine the teachings of the three references (Curry, Amir, and Nizamuddin) to achieve the invention of claim 4. A *prima facie* case of obviousness has therefore not been established with respect to claim 4.

For the foregoing reason, it is respectfully requested that the final rejection of the above claim be reversed.

D. Claims 12, 25, 39, And 42 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,487,186 (Verthein).

Claims 12, 25, 39, and 42 are dependent claims that were rejected over Curry, Amir, and Verthein. In view of the fact that the rejection of base claims over Curry and Amir is defective, it is respectfully submitted that the obviousness rejections of these claims over Curry, Amir, and Verthein is also defective.

In addition, with respect to claims 12, 25, 39, and 42, the Examiner conceded that "Curry and Amir fail to disclose the claimed invention." 7/13/2004 Office Action at 5. However, the Examiner cited Verthein as disclosing "DTMF tone transmits [sic] via UDP channel (See col. 11, lines 9-19)." *Id.*

Although Verthein teaches the use of UDP-based RTP packets, Verthein does not provide the necessary suggestion or motivation to modify the teachings of Curry and Amir to achieve the invention of claims 12, 25, 39, and 42.

Reversal of the final rejection of the above claims is therefore respectfully requested.

E.   Claims 13, 26, And 48 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,275,573 (Naor).

Claims 13, 26, and 48 were rejected as being obvious over Curry and Amir in view of Naor. In view of the fact that the rejection of base claims over Curry and Amir is defective, it is respectfully submitted that the obviousness rejections of claims 13, 26, and 48 over Curry, Amir, and Naor is also defective.

Moreover, the Examiner conceded that Curry and Amir "fail to disclose the claimed invention." 7/13/2004 Office Action at 6. However, the Examiner cited Naor as teaching the encryption of digits before transmitting, pointing specifically to element 34 of Fig. 1 of Naor.

Claim 13 recites that the controller scrambles the stimulus message before encapsulation. Although Naor teaches encryption by an encryption/decryption unit connected to a telephone, there is no teaching or suggestion in Naor of encrypting or scrambling a stimulus message before *encapsulation* into one or more packets. Therefore, Naor does not provide the requisite suggestion to modify the teachings of Amir and Curry to achieve the claimed invention. A *prima facie* case of obviousness has therefore not been established with respect to claims 13, 26, and 48 over Curry, Amir, and Naor.

It is respectfully requested that the final rejection of the above claims be reversed.

F.   Claims 13, 14, 26, 27, 47, And 48 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,438,124 (Wilkes).

Claims 13, 14, 26, 27, 47, and 48 were rejected as being obvious over Curry and Amir in view of Wilkes. In view of the fact that the rejection of base claims over Curry and Amir is defective, it is respectfully submitted that the obviousness rejections of claims 13, 14, 26, 27, 47, and 48 over Curry, Amir, and Wilkes is also defective.

In addition, the Examiner conceded that Curry and Amir fail to disclose the invention of the above claims. 7/13/2004 Office Action at 6. However, the Examiner cited Wilkes as disclosing the scrambling of a stimulus message or encryption of packets. Although Wilkes refers to encrypting conversation between devices, there is no teaching or suggestion by Wilkes of scrambling a stimulus message before encapsulation or encrypting one or more packets that encapsulate stimulus control information. Therefore, Wilkes does not provide the requisite suggestion to modify the teachings of Curry and Amir to achieve the claimed invention. A *prima facie* case of obviousness has therefore not been established with respect to claims 13, 14, 26, 27, 47, and 48 over Curry, Amir, and Wilkes.

Reversal of the final rejection of the above claims is respectfully requested.

G.   **Claims 35, 40, 49, And 50 Were Rejected Under § 103 Over Curry And Amir In View Of U.S. Patent No. 6,389,010 (Kubler).**

Claims 35, 40, 49, and 50 were rejected as being obvious over Curry, Amir, and Kubler. In view of the fact that the rejection of base claims over Curry and Amir is defective, it is respectfully submitted that the obviousness rejections of claims 35, 40, 49, and 50 over Curry, Amir, and Kubler is also defective.

Reversal of the final rejection of the above claims is therefore respectfully requested.

VIII. CONCLUSION

In view of the foregoing, reversal of all final rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

Date: *Feb 25, 2005*

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APPENDIX OF CLAIMS

The claims on appeal are:

1   1.   Apparatus for use in a telephony system, comprising:

2   a digital interface for connection with a stimulus telephone;

3   a packet interface for communicating with a packet-based network; and

4   a controller to receive stimulus control information from the digital interface and

5 to encapsulate the stimulus control information into one or more packets for transmission over

6 the packet-based network through the packet interface.

1   2.   The apparatus of claim 1, wherein the controller encapsulates the stimulus control

2 information into an Internet Protocol packet.

1   3.   The apparatus of claim 1, wherein the digital interface includes a UART interface.

1   4.   The apparatus of claim 1, wherein the digital interface includes a time

2 compression multiplex interface.

1   5.   The apparatus of claim 1, wherein the controller adds a destination address of a

2 telephone switch system into the one or more packets.

1   6.   The apparatus of claim 1, wherein the controller adds a destination address of a

2 second stimulus telephone into the one or more packets.

1   7.   The apparatus of claim 1, wherein the stimulus control information is according to

2 a first stimulus language, and wherein the stimulus control information remains in the first

3 stimulus language after encapsulation.

1   8.   The apparatus of claim 1, wherein the controller encapsulates the stimulus control

2 information without translating the stimulus control information into a different form.

1   9.   The apparatus of claim 8, wherein the controller encapsulates the stimulus control

2   information by adding header information according to a network protocol.

1   10.   The apparatus of claim 9, wherein the network protocol header information

2   includes an Internet Protocol header.

1   11.   The apparatus of claim 9, wherein the controller adds further header information

2   according to a transport protocol.

1   12.   The apparatus of claim 11, wherein the further header information includes a User

2   Datagram Protocol header.

1   13.   The apparatus of claim 1, wherein the controller also scrambles the stimulus

2   message before encapsulation.

1   14.   The apparatus of claim 1, wherein the controller encrypts the one or more packets.

1   15.   The apparatus of claim 1, further comprising a receiver to receive the one or more

2   packets, the receiver including an element to decapsulate the one or more packets to extract the

3   stimulus control information.

1   16.   The apparatus of claim 15, wherein the receiver is associated with a second

2   stimulus device, and wherein the extracted stimulus control information is in a native stimulus

3   language of the second stimulus device.

1   17.   The apparatus of claim 1, wherein the stimulus control information includes at

2   least one of hook state information and key press event information, the controller to encapsulate

3   the at least one of the hook state information and key press event information into the one or

4   more packets.

1   18.   The apparatus of claim 1, wherein the stimulus control information includes a

2   command selected from the group consisting of a handset volume control command, a handset

3   connect/disconnect command, and a ringer activation command, the controller to encapsulate the

4   command selected from the group consisting of the handset volume control command, the

5   handset connect/disconnect command, and the ringer activation command.

1   20.   A method for use in a telephony system, comprising:

2   communicating stimulus control information with a stimulus telephone through a

3   first interface connected to the stimulus telephone, and packet information with a packet-based

4   network through a packet interface;

5   encapsulating stimulus control information received from the first interface; and

6   transmitting the encapsulated stimulus control information as at least one packet

7   to the packet interface.

1   21.   The method of claim 20, further comprising:

2   decapsulating one or more packets received from the packet interface and

3   containing stimulus control information; and

4   transmitting the stimulus control information of the decapsulated one or more

5   packets to the first interface.

1   22.   The method of claim 20, wherein the stimulus control information is in a native

2   stimulus language, and wherein encapsulating the stimulus control information includes inserting

3   the stimulus control information in its native stimulus language into a payload of the at least one

4   packet.

1   23.   The method of claim 22, wherein encapsulating the stimulus control information

2   includes adding a network protocol header to the stimulus control information.

1   24.   The method of claim 23, wherein encapsulating the stimulus control information

2   includes adding an Internet Protocol header.

1   25.   The method of claim 24, wherein encapsulating the stimulus control information

2   further includes adding a User Datagram Protocol header.

1   26.   The method of claim 20, further comprising scrambling the stimulus control

2   information before encapsulating.

1   27.   The method of claim 20, further comprising encrypting the at least one packet.

1   28.   An article including one or more machine-readable storage media containing

2   instructions for call control in a telephony system, the instructions when executed causing a

3   device to:

4   receive data according to a stimulus protocol from a first interface connected to a

5   stimulus telephone;

6   encapsulate the data into one or more packets; and

7   communicate the one or more packets to a packet-based data network.

1   29.   The article of claim 28, wherein the one or more storage media contain

2   instructions that when executed causes the device to:

3   receive a packet containing data according to the stimulus protocol;

4   decapsulate the packet; and

5   communicate the data according to the stimulus protocol to the first interface.

1   30.   A data signal embodied in a carrier wave and containing instructions for call

2   control in a telephony system, the instructions when executed causing a device to:

3   receive at least one packet containing a stimulus message according to a first

4   language;

5   decapsulate the at least one packet to extract the stimulus message according to

6   the first language; and

7   send the stimulus message according to the first language to a first interface

8   connected to a stimulus telephone.

1   31.   The data signal of claim 30, further containing instructions that when executed

2   causes the device to:

3   receive a stimulus message according to the first language through the first

4   interface connected to the stimulus telephone; and

5   encapsulate the stimulus message according to a first language into at least one

6   packet.

1   34.   An apparatus for use in a telephony system, comprising:

2   means for receiving a stimulus message through a first interface connected to a

3   stimulus telephone;

4   means for encapsulating the stimulus message into at least one packet; and

5   means for transmitting the at least one packet to a packet-based network.

1   35.   The apparatus of claim 1, further comprising an interface card adapted to be

2   inserted into a slot of the stimulus telephone, the interface card comprising the digital interface,

3   the packet interface, and the controller.

1   36.   The apparatus of claim 1, wherein the digital interface is adapted to exchange the

2   stimulus control information with the stimulus telephone.

1   37.   The apparatus of claim 1, wherein the stimulus control information contains a

2   command according to a stimulus protocol selected from the group consisting of off-hook, on-

3   hook, handset volume control, handset connect, and handset disconnect, the controller to

4   encapsulate the command selected from the group consisting of off-hook, on-hook, handset

5   volume control, handset connect, and handset disconnect in the one or more packets.

1   38.   The apparatus of claim 1, further comprising a receiver to receive one or more

2   inbound packets containing inbound stimulus control information, the controller to decapsulate

3   the one or more inbound packets to extract the inbound stimulus control information.

1   39.   The apparatus of claim 38, wherein each of the one or more inbound packets

2   contains a User Datagram Protocol (UDP) port number, the controller to determine from the

3   UDP port number whether the corresponding inbound packet contains voice data or stimulus

4   control information.

1   40.   The method of claim 20, further comprising providing an interface card to be

2   inserted into a slot of the stimulus telephone, the interface card having the first interface and the

3   packet interface,

4   wherein encapsulating the stimulus control information and transmitting the

5   encapsulated stimulus control information and transmitting the encapsulated stimulus control

6   information is performed by the interface card.

1   41.   The method of claim 20, wherein encapsulating the stimulus control information

2   comprises encapsulating a command according to a stimulus protocol selected from the group

3   consisting of off-hook, on-hook, handset volume control, handset connect, and handset

4   disconnect.

1   42.   The method of claim 21, wherein each of the received one or more packets

2   contains a User Datagram Protocol (UDP) port number, the method further comprising

3   determining from the UDP port number whether the corresponding received packet contains

4   voice data or stimulus control information.

1   43.   The article of claim 28, wherein encapsulating the data according to the stimulus

2   protocol comprises encapsulating one of an off-hook stimulus command, on-hook stimulus

3   command, handset volume control stimulus command, handset connect stimulus command, and

4   handset disconnect stimulus command.

1   44.   The data signal of claim 30, wherein receiving the at least one packet containing

2   the stimulus message comprises receiving the at least one packet containing stimulus message

3   containing at least a command selected from the group consisting of off-hook, on-hook, handset

4   volume control, handset connect, and handset disconnect.

1   45.   The apparatus of claim 34, wherein the stimulus message contains at least a

2   command selected from the group consisting of off-hook, on-hook, handset volume control,

3   handset connect, and handset disconnect, the means for encapsulating to encapsulate the

4   command selected from the group consisting of off-hook, on-hook, handset volume control,

5   handset connect and handset disconnect.

1   46.   The apparatus of claim 34, further comprising:

2   means for decapsulating the at least one packet received from the packet-based

3   network and containing the stimulus message.

1   47.   The apparatus of claim 34, further comprising means for encrypting the at least

2 one packet.

1   48.   The apparatus of claim 34, further comprising means for scrambling the stimulus

2 message before encapsulating.

1   49.   The apparatus of claim 35, wherein the interface card is adapted to be inserted

2 into a slot of a telephone.

1   50.   The method of claim 40, wherein providing the interface card comprises inserting

2 the interface card into a slot of the stimulus telephone.

1   51.   The apparatus of claim 1, wherein the digital interface is adapted to communicate

2 with the stimulus telephone through an input/output port of the stimulus telephone.

1   52.   The method of claim 20, wherein communicating the stimulus control information

2 comprises communicating the stimulus control information through the interface and an

3 input/output port of the stimulus telephone.

1   53.   The article of claim 28, wherein receiving the data according to the stimulus

2 protocol comprises receiving the data according to the stimulus protocol through the first

3 interface and an input/output port of the stimulus telephone.

1   54.   The data signal of claim 30, wherein sending the stimulus message comprises

2 sending the stimulus message to the first interface and an input/output port of the stimulus

3 telephone.

1   55.   The apparatus of claim 34, wherein receiving means is for receiving the stimulus

2 message through the first interface and an input/output port of the stimulus telephone.

EVIDENCE APPENDIX

The Appeal Brief cites to the following evidence to support Appellant's arguments:

U.S. Patent No. 6,549,621;
U.S. Patent No. 6,470,020.

Both patents were submitted in an Information Disclosure Statement mailed May 13, 2004. Copies of the two patents are attached hereto.
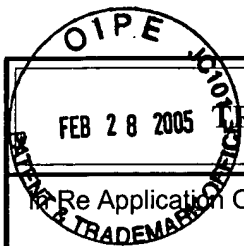
TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. NRC.0002US

In Re Application Of: Shane M. Rogers et al.

Application No. 09/517,903	Filing Date 03-03-2000	Examiner Steven Nguyen	Customer No. 21906	Group Art Unit 2665	Confirmation No. 5600

Invention: **Transporting Telephony Services Over a Data Network**

COMMISSIONER FOR PATENTS:

Transmitted herewith ~~in triplicate~~ is the Appeal Brief in this application, with respect to the Notice of Appeal filed on **December 29, 2004**

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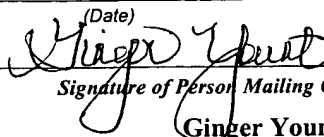
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Dated: **February 25, 2005**

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